

Remarks

Claims 1, 7-10, 16-21 and 27 are rejected under 35 U.S.C. §102(e) as being anticipated by Chang. However, the message facility layer of Chang while supporting asynchronous and synchronous message passing between Java objects, fails to describe “application blocking logic” or asynchronous signaling logic coupled “to notify” the client application of asynchronous events. Claim 1 calls for application blocking logic to block and unblock the client application. The Examiner has not identified this blocking and unblocking in the Chang reference. Rather, the Examiner relies upon the fact that the user waits for a result upon sending a synchronous message. Waiting in the Chang application appears to be initiated by the client application itself. In Applicants’ invention, the claimed message passing service “blocks” the MPS client. The claimed message passing service also unblocks the MPS client. In Chang, there is no act of unblocking by the message facility layer. The client waits for a message. Once the client receives the message, it is no longer waiting for the message. For a further understanding, it is noted that in a preferred embodiment of Applicants’ invention, the MPS blocks the MPS client by suspending the corresponding operating system task. In view of the lack of application blocking logic for both blocking and unblocking the client, anticipation is absent.

Chang also fails to disclose asynchronous signaling logic that notifies the client of asynchronous events. Without the claimed notification, the user must first check to see if the result has arrived. (“the user first checks if the result has arrived” Col. 15, lines 30-39). Indeed, upon obtaining a response to an asynchronous request, a request message handler merely uses its conventional send procedure to send the response message to the user. There is no “callback” routine nor any notification of the user that the response has been received. Although the response has been received, the user must check to learn if the result has arrived because of the lack of notification. For both of these above-stated reasons, the message passing service of Applicants’ invention is distinguished from that described by Chang, and thus claim 1 and all claims depending therefrom should be allowed. For the same reasons, claims 10 and 27 and all claims depending therefrom should be allowed.

Claim 18 is similarly patentable over Chang. Claim 18 requires the acts of blocking the client application and unblocking the client application. The Examiner merely notes the passive activity of the user in Chang waiting for a response. The wait is over when the response arrives. Applicants' invention, on the other hand, calls for blocking the client application and unblocking the client application. Moreover, unblocking the client application and passing the response to the client are two identifiable acts. Blocking and unblocking are not found in Chang and, thus, claim 18 and all claims depending therefrom are patentable.

Claims 7 and 16 require additional features which make these claims patentable over Chang for additional reasons. Claims 7 and 16 requires that the asynchronous signaling logic be provided to the message passing service by the client application. For example, in a preferred embodiment of the present invention, the client application provides a pointer to the client's "callback" routine. Thus, notification of an asynchronous event such as receiving the response message is provided to the client in the manner selected by the client. Chang merely describes a request message handler that sends a response message using the message <Message. send ()>. Chang provides no suggestion, disclosure nor teaching of modifying the request message handler by providing it with a routine from the client application. For these additional reasons, claims 7 and 16 are allowable.

Claims 8 and 17 are further patentable over Chang. Claims 8 and 17 require invoking the "callback" routine that was received from the client application. Chang merely discloses the message request handler handling the message in its ordinary way. There is no invocation of a "callback" routine received from a client application. Therefore, claims 8 and 17 are patentable over Chang.

With respect to claim 21, the acts of unblocking the client application and passing the asynchronous message to the client application are separately recited. Chang merely discloses the message being passed to the client application and upon the user getting the result the user can stop waiting. There is no identifiable act of unblocking the client application as required in claim 21. For this additional reason, claim 21 is allowable.

Claims 2-6, 11-15 and 22-26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Heiney. In their preferred embodiment, Applicants have made use of the opening session message to supply a "callback" routine to the message passing service, no such provision of a "callback" routine is disclosed by either Heiney or Chang. There is no similar incentive in Chang for adding the session control logic of Heiney. Indeed, there is no specific incentive or motivation in Chang or for adding the session control logic. The Examiner merely generalizes that session control logic is applicable to interprocess communication. The incentive or motivation to add session control is missing. For these reasons, an obviousness rejection of claims 2-6, 11-15 and 22-26 is unsupportable.

Furthermore, claims 2-6 and 11-15 are dependent upon claims 1 and 10 respectively and should be allowed for the reasons cited above with respect to claims 1 and 10. In addition, many of these claims include further references and uses of the blocking and unblocking mechanisms of Applicants' invention. The lack of a disclosure of these functions in the cited references is a further reason for allowing the claims.

With respect to claims 22-26, in addition to the reasons cited above, these claims also require the act of "notifying the client application using asynchronous signaling mechanism." As noted above with respect to claim 1, Chang discloses providing a response to a request but there is no notification to the client. The client needs to check to determine whether a result has arrived. For these additional reasons, claims 22-26 are allowable.

The Applicants' invention is further distinguished from the cited art in claim 23 which requires a "callback" routine provided by the client application. Chang fails to disclose any action on the part of the user to provide a "callback" routine to the request message handler. Neither does Chang disclose invoking such a "callback" routine as required by claim 24. Rather the standard request message handler routines are followed. For these additional reasons, claims 23 and 24 are allowable over the art of record.

All claims presently in the application are believed to be allowable over the art of record and early notice to that effect is respectfully solicited.

Respectfully submitted,

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A handwritten signature in cursive script, appearing to read "Robert M. Asher", is written over a horizontal line.

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